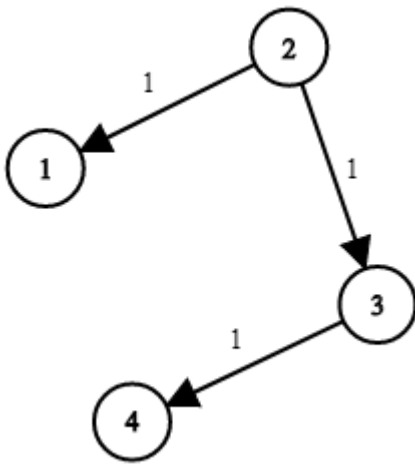


Network Delay Time [\(View\)](#)

You are given a network of n nodes, labeled from 1 to n . You are also given `times`, a list of travel times as directed edges `times[i] = (ui, vi, wi)`, where u_i is the source node, v_i is the target node, and w_i is the time it takes for a signal to travel from source to target.

We will send a signal from a given node k . Return the time it takes for all the n nodes to receive the signal. If it is impossible for all the n nodes to receive the signal, return -1 .

Example 1:



Input: `times = [[2,1,1],[2,3,1],[3,4,1]]`, $n = 4$, $k = 2$

Output: 2

Example 2:

Input: `times = [[1,2,1]]`, $n = 2$, $k = 1$

Output: 1

Example 3:

Input: `times = [[1,2,1]]`, $n = 2$, $k = 2$

Output: -1

Constraints:

- $1 \leq k \leq n \leq 100$
- $1 \leq \text{times.length} \leq 6000$
- $\text{times}[i].\text{length} == 3$
- $1 \leq u_i, v_i \leq n$
- $u_i \neq v_i$
- $0 \leq w_i \leq 100$
- All the pairs (u_i, v_i) are **unique**. (i.e., no multiple edges.)